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Book review

Owlet caterpillars of Eastern North America by D. L. Wagner, D. F. Schweitzer, J. B. Sullivan & R. C. Reardon, 2011

Princeton University Press, Princeton & Oxford, 576 pp. ISBN 978-0-691-15042-0. Price: appr. US$ 35.00.

Caterpillars of Macrolepidoptera are generally well known with regard to their morphology, diversity of resource affiliations, and ecology. Strikingly enough, however, the identification of caterpillars found in the field still often confronts the researcher with a severe challenge. Even for well-studied regions such as Europe, Japan or North America, few books are available which allow for the quick, easy and safe identification of caterpillar samples beyond the few commonest species. Available treatments tend to be either very 'technical' in style, or if more 'popular' in approach they are extremely incomplete in their species coverage. Or, in some cases, good illustrations are embedded in large multi-volume monographs which are not really convenient to use for identification purposes. Yet, this is what ecologists, conservationists, or dedicated amateurs would demand the most. The present volume fills this gap for the owlet moths (larger part of the superfamily Noctuoidea) from eastern North America, and it does so in a remarkable manner. More than 800 species are covered from the families Noctuidae and Erebidae, following the modern concepts of phylogeny and systematics of the Noctuoidea. Two erebid subfamilies (Arctiinae and Lymantriinae) are not included since they have been dealt with in an earlier companion volume (Wagner, 2005), with 44 and 10 species, respectively. Also Notodontidae (50 spp.) were already treated in that earlier volume, such that color figures are now available for distinctly over 900 species of North American Noctuoidea in just two books.

The new book starts with a concise, but scientifically up-to-date introduction into caterpillars: their role in ecology, their morphology and diet, techniques for sampling caterpillars in the field or raising them from captured adults, and classification. The heart of the book is the species accounts, sorted according to the newest systematics. For each subfamily first a general introduction is given, followed by detailed treatments of species. In most cases, each species has its own page, with superb color photographs of a mature larva (but often accompanied by smaller pictures of other instars, or different color morphs) plus color shots of living and spread adult moths. Each species account is densely packed with valuable information on diagnostic characters, habitats, host plants and other details about bionomics, behavior, or life-history. In addition to these full accounts, a sizeable number of species is portrayed in more condensed manner, usually 2 to 4 species per page. A glossary, an extensive references list, and two separate indexes to host plants and moths supplement this book.

This volume is really a 'must-have' for any lepidopterist or ecologist with interest in caterpillar biology. Not only are the illustrations of stunning quality. Also the scientific content meets almost all what one might wish to learn from such a book, at least as an ecologist or caterpillar enthusiast. The text avoids burdens of technical jargon and the book remains concise in its approach. In this regard, Wagner *et al.* differ distinctly from the 3-volume monumental monograph by Ahola & Silvonen (2005-2011) on North European owlet moths. This latter bilingual series provides far more extensive anatomical details in a more 'scientific' style and also includes identification keys. For the systematic specialist with particular interest in the Noctuoidea, this type of monograph series is of course essential. But the quality of color illustrations does not meet what Wagner *et al.* now have produced for a significant complementary fraction of the Holarctic noctuid fauna. Remarkably, the novel book by Wagner *et al.* is also offered at a very modest price. In sum, the *Owlet caterpillars of Eastern North America*

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are a most accessible source of information for any naturalist. If you are going for a first and intense encounter with the realm of Nearctic owlet moth larvae, their fascinating morphological and ecological diversity, the book by Wagner and colleagues is the way to go. It would be great to see similar volumes being published on the remaining large 'macro-moth' family Geometridae from the Eastern United States, or companion volumes for the Western part of the continent.

Literature cited

Ahola, M., & Silvonen, K. 2005-2011. Pohjoisen Euroopaan yökkösten toukat / Larvae of Northern European Noctuidae (bilingual, in Finnish and English). Volumes 1 to 3. KuvaSeppälä Yhtiot Oy, Vaasa (vols. 1 & 2), and Apollo Books, Stenstrup (vol. 3); 657 + 672 + 599 pp.

Wagner, D.L. 2005. Caterpillars of Eastern North America. Princeton University Press, Princeton & Oxford, 512 pp.

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